



# Launch Mission Execution Forecast

**Mission:** Falcon 9 CRS-25

**Issued:** 14 July 2022 / 0900L (1300Z)

**Valid:** 14 July 2022 / 2039-2049L (15/0039-0049Z)



**Forecast Discussion:** No significant changes to today's forecast. Today, the ridge axis will slowly migrate northward and begin to shift low level winds to a southerly direction. This will allow the east coast seabreeze to migrate further inland by the afternoon and evening hours, triggering the bulk of the diurnal thunderstorms farther to our west. An isolated shower or storm cannot be ruled out from an eastward moving outflow, but most of the activity is still expected to remain inland during the evening hours. With upper level winds coming from the east/northeast, this will also help keep any anvil clouds associated with the storms to the west. Thus, the primary concerns are the Cumulus Cloud Rule and Flight Through Precipitation.

For tomorrow and Saturday, the overall setup generally looks similar to Thursday, but moisture and instability will increase by Saturday as an upper level feature moves in from the southeast. The main concerns remain the same as on Thursday, with the addition of the Anvil Cloud Rules on Saturday as upper level winds shift westerly.

Launch Day	Probability of Violating Weather Constraints <sup>1</sup>					
	<b>30%</b>	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation				
	Weather Conditions				Additional Risk Criteria <sup>2</sup>	
	<b>Weather/Visibility:</b> Isold Showers / 7 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low	
	Type	Coverage	Base (ft)	Tops (ft)		
<b>Temp/Humidity:</b> 81°F / 82%	Cumulus	Scattered	3,000	10,000	<b>Booster Recovery Weather:</b> Low	
<b>Liftoff Winds (200'):</b> 180° 15 - 20 mph	Cirrostratus	Scattered	27,000	32,000	<b>Solar Activity:</b> Low	
24-Hour Delay	Probability of Violating Weather Constraints					
	<b>30%</b>	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation				
	Weather Conditions				Additional Risk Criteria	
	<b>Weather/Visibility:</b> Isold Showers / 7 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low	
	Type	Coverage	Base (ft)	Tops (ft)		
<b>Temp/Humidity:</b> 81°F / 78%	Cumulus	Scattered	3,000	9,000	<b>Booster Recovery Weather:</b> Low	
<b>Liftoff Winds (200'):</b> 130° 12 - 17 mph	Cirrostratus	Scattered	28,000	32,000	<b>Solar Activity:</b> Low	
48-Hour Delay	Probability of Violating Weather Constraints					
	<b>40%</b>	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Anvil Cloud Rules				
	Weather Conditions				Additional Risk Criteria	
	<b>Weather/Visibility:</b> Sct Showers / 7 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low	
	Type	Coverage	Base (ft)	Tops (ft)		
<b>Temp/Humidity:</b> 80°F / 82%	Cumulus	Scattered	3,000	14,000	<b>Booster Recovery Weather:</b> Low	
<b>Liftoff Winds (200'):</b> 130° 12 - 17 mph	Cirrostratus	Broken	26,000	32,000	<b>Solar Activity:</b> Low	
Notes	1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window.					
	2. Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor.					
See <a href="https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf">https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf</a> for more information						
Next Forecast Will Be Issued		As needed				